Claims

1. Method for the detection of cutaneous supergroup B HPVs comprising the steps of:

(a) providing a sample suspected of harbouring cutaneous supergroup B HPVs;

(b) providing a plurality of pairs of bi-directional primers collectively substantially complementary to DNA of all cutaneous supergroup B HPVs;

(c) performing a reaction to amplify DNA derived from the said sample using said plurality of primers; and

(d) detecting DNA amplification products from cutaneous supergroup B HPV from said sample.

2. Method according to claim 1, wherein step (d) is carried out by hybridising the reaction products of the said DNA amplification reaction to a plurality of generic cutaneous supergroup B HPV probes.

3. Method according to claim 1 or 2, wherein said plurality of pairs of bi-directional primers comprises primers that are collectively substantially complementary to a first consensus region in the DNA of all cutaneous supergroup B HPVs, and which plurality further comprises primers that are collectively substantially complementary to a second consensus region in the DNA of all cutaneous supergroup B HPVs.

4. Method according to claim 3, wherein said first and second consensus regions are in the L1 ORF of cutaneous supergroup B HPVs.

5. Method according to claim 4, wherein said first and second consensus regions are substantially as defined in Figure 2.

6. Method according to claim 5, wherein said plurality of pairs of primers comprises the primers of Figure 1.

7. Method according to claim 6, wherein one of each pair of primers of said plurality of pairs of bi-directional primers comprise a biotin label.

8. Method according to any one of the previous claims, wherein said reaction to amplify DNA is performed under conditions of reduced stringency.

9. Method according to any one of the claims 2-8, wherein said plurality of supergroup B HPV probes is substantially complementary to the nucleic acid sequence of the said DNA amplification products from all supergroup B HPVs.

10. Method according to any one of the claims 2-9, wherein said supergroup B HPV probes comprise the probes of Figure 3.

11. Method according to claim 10, wherein said probes comprise a DIG label.

12. Method for typing of cutaneous supergroup B HPVs comprising the steps of:

(a) providing DNA amplification products by amplifying DNA of cutaneous supergroup B HPV using a plurality of pairs of bi-directional primers; and

(b) detecting DNA amplification products from one or more supergroup B HPV types by hybridising the said amplification products to at least one cutaneous supergroup B HPV probe that is substantially complementary to the DNA of at least one but not all cutaneous supergroup B HPV types.

13. Method according to claim 12, wherein said plurality of pairs of bi-directional primers comprises primers that are collectively substantially complementary to a first consensus region in the DNA of all cutaneous supergroup B HPVs, and which plurality further comprises primers that are collectively substantially complementary to a second consensus region in the DNA of all cutaneous supergroup B HPVs.

14. Method according to claim 13, wherein said first and second consensus regions are in the L1 ORF of cutaneous supergroup B HPVs.

15. Method according to claim 14, wherein said first and second consensus regions are substantially as defined in Figure 2.

16. Method according to claim 15, wherein said plurality of pairs of bi-directional primers comprises the primers of Figure 1.

17. Method according to claim 16, wherein one of each pair of primers of said plurality of pairs of bi-directional primers comprise a biotin label.

18. Method according to any one of claims 12-17, wherein said at least one probe is substantially complementary to the DNA of exactly one type of supergroup B HPV.

19. Method according to any one of the claims 12-18, wherein said at least one probe is selected from the probes of Figure 5.

20. Method according to any one of the claims 12-19, wherein the detection comprises the use of a reverse line blot.

21. Bi-directional primers for use in a method according to any one of the previous claims, which primers are collectively substantially complementary to a first and a second consensus region in the L1 ORF of all supergroup B HPVs.

22. Bi-directional primers of Figure 1.

23. Generic detection probes for the detection of cutaneous supergroup B HPVs, which probes are collectively substantially complementary to a region in the L1 ORF of all supergroup B HPVs between nucleotide positions 6539 and 6610 of HPV 4 and corresponding region of the other cutaneous supergroup B HPV types.

24. Generic detection probes of Figure 3.

25. Detection probes for the detection of cutaneous supergroup B HPV types, which probes are substantially complementary to a region in the L1 ORF of at least one but not all cutaneous supergroup B HPV types between nucleotide positions 6539 and 6610 of HPV 4 and corresponding region of the other cutaneous supergroup B HPV types.

26. Type-specific detection probes for the detection of cutaneous supergroup B HPV types, which probes are substantially complementary to a region in the L1 ORF of exactly one type of cutaneous supergroup B HPV type between nucleotide positions 6539 and 6610 of HPV 4 and corresponding region of the other cutaneous supergroup B HPV types.

27. Type-specific detection probes of Figure 5.